



# Unibraze 410NiMo-16

**CLASSIFICATIONS:** AWS A5.4/ASME SFA 5.4 Class E410NiMo-16 UNS W41016

**DESCRIPTION:** Unibraze 410NiMo-16 electrodes are used for welding ASTM CA6NM castings or similar materials, as well as light-gauge 410, 410S and 405 base metals. Weld metal deposited by this electrode is modified to contain less Cr and more Ni than weld metal deposited by E410 electrodes. The objective is to eliminate ferrite in the microstructure, as ferrite has a deleterious effect on mechanical properties of this alloys. Final postweld heat treatment should not exceed 1150° (620°). Higher temperatures may result in rehardening due to untempered martensite in the microstructure after cooling to room temperature. Applications include turbines, valve bodies, high pressure piping, offshore, and power generation.

## Typical Chemistry:

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu	FN (WRC)
AWS/ ASME	.06 max	11.0 – 12.5	4.0 – 5.0	.40 - .70	1.0 max	.90 max	.04 max	.03 max	.75 max	Not Required
Typical (As welded)	.02	11.7	4.6	.58	.50	.37	.02	.01	.07	-

## Typical Mechanical Properties:

Tensile Strength	134,000 psi
Yield Strength	123,000psi
Elongation	18%

## Typical Welding Parameters: (DCEP or AC)

Diameter	Amps Flat	Amps Vertical/Overhead
1/8"	85-110	8090
5/32"	110-140	100-120
3/16"	120-160	110-130

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.